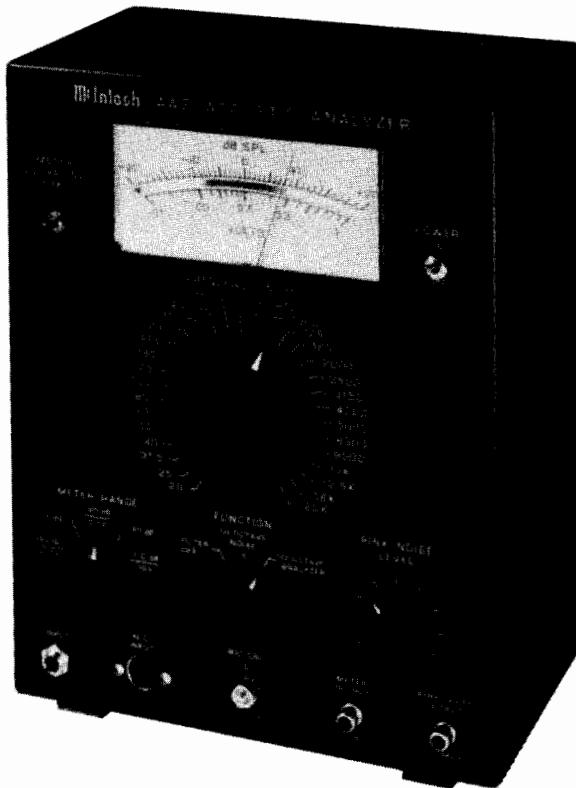


McIntosh

AA2 ACOUSTIC ANALYZER



SERVICE INFORMATION

STARTING WITH SERIAL NO. BU1001

McINTOSH LABORATORY INC. BINGHAMTON, NEW YORK 13903

039-027

PERFORMANCE LIMITS

METER CIRCUIT

Frequency Range: 20 Hz to 20 kHz, response \pm 0.5 dB

Waveform Response: Average responding calibrated in RMS volts and dB SPL

Averaging Time: Selectable, fast and slow (5 sec. and 30 sec.)

Signal Range: SPL, 60 dB to 100 dB at mid scale volts, 1mV to 100m volts AC full scale

Meter Scales: Volts calibrated from .01 to 1. SPL, calibrated from -20 dB to + 20 dB

Crest Factor: Greater than 4 at full scale.

Input Impedance: 50k ohms and less than 50pF

Meter Output Level And Impedance: 1 volt output at full scale meter reading

Source impedance 300 ohms

Load impedance not less than 10k ohms

ONE THIRD OCTAVE FILTER

Frequency Range: 20 Hz to 20 kHz in 31 ranges with ISO recommended band frequencies (20, 25, 31.5, 40, 50, 63, 80, 100, 125, 160, 200 and multiples of 10 and 100 thereof)

Selectivity: 1/3 octave bandwidth (29% wide). Two filter sections are used each having a pole butterworth filter characteristic. At .58 and 1.8 times the center frequency, each section is down 15 dB (30 dB for both sections).

PINK NOISE GENERATOR

Frequency Range: 20 Hz to 20 kHz with output \pm 1 dB per 1/3 octave bandwidth

Output Level: 0 to 1 volt RMS into 10 k ohms or higher. Output source impedance less than 1 k ohm.
Output is peak limited for all settings of the level control.

Crest Factor: About 4

Source: Digital logic pseudo random noise generator

CM 201 CONDENSER MICROPHONE

Response 20 - 20,000 Hz (see typical curves)

Sensitivity -65 dB re 1 volt per microbar at 1 kHz nominal

Noise equivalent 44 dB SPL unweighted

Cartridge diameter 13 mm (.46 inches)

Cable:- Two conductor shielded. Length 10 meters (32.8 feet)

Stand adapter with 5/8 - 27 thread

POWER REQUIREMENTS

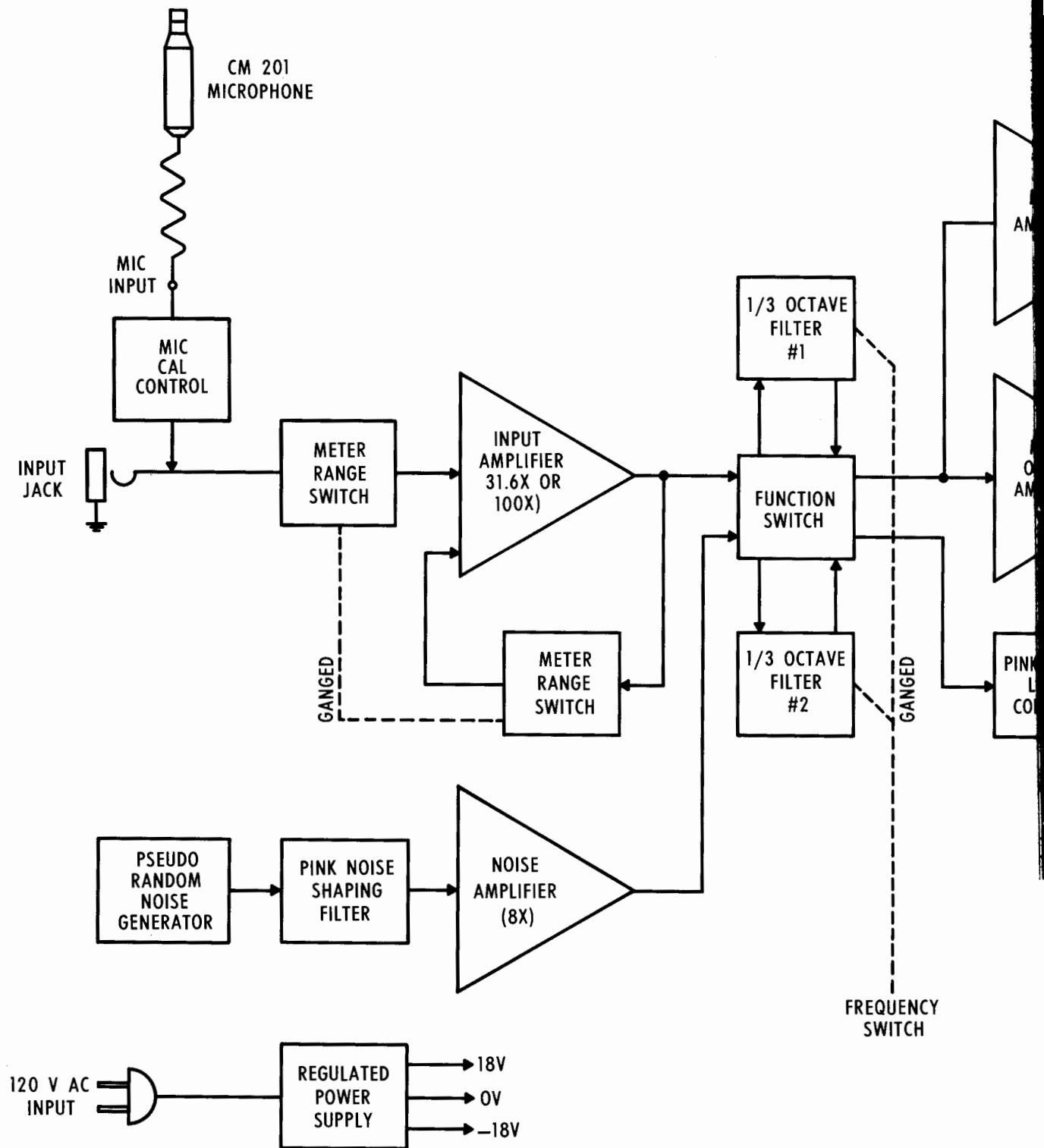
120 volts, 50-60 Hz, 6 watts

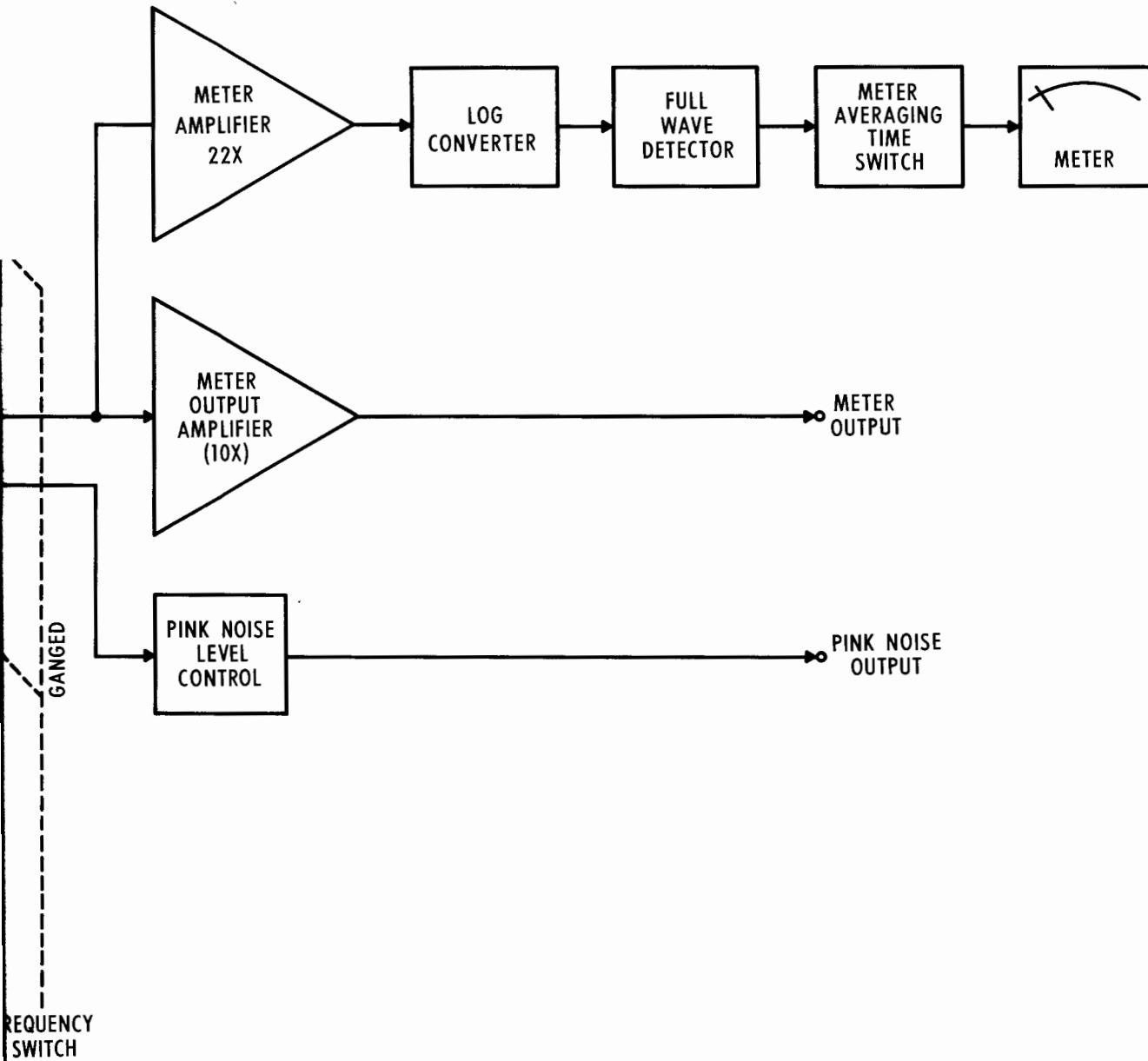
MECHANICAL INFORMATION

Size: Length 11.75" (29.8 cm), width 8.75" (22.2 cm), height 9.5" (24.1 cm)

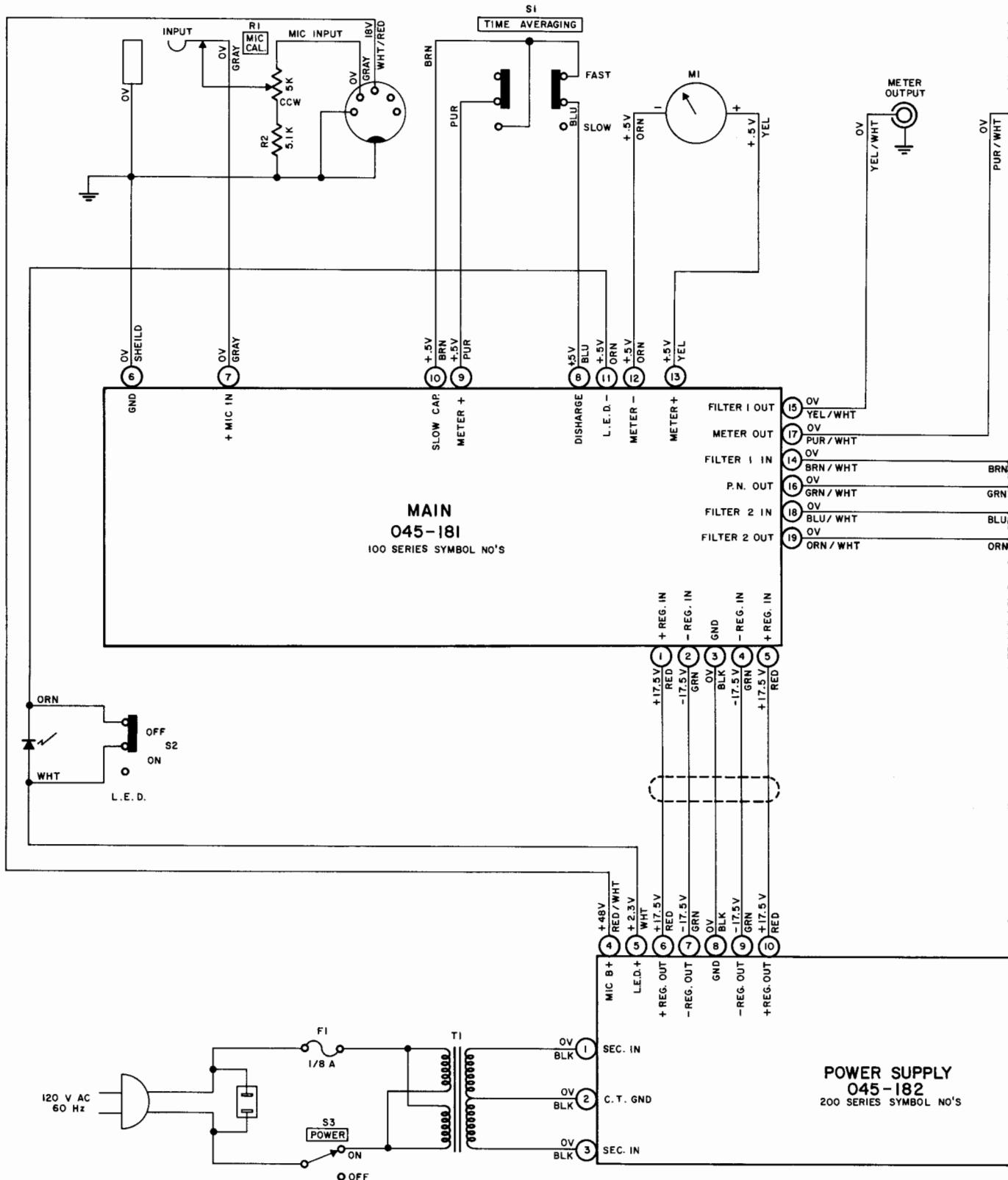
Weight: 14 pounds (6.35 kg) net, 16 pounds (7.26 kg) in shipping carton

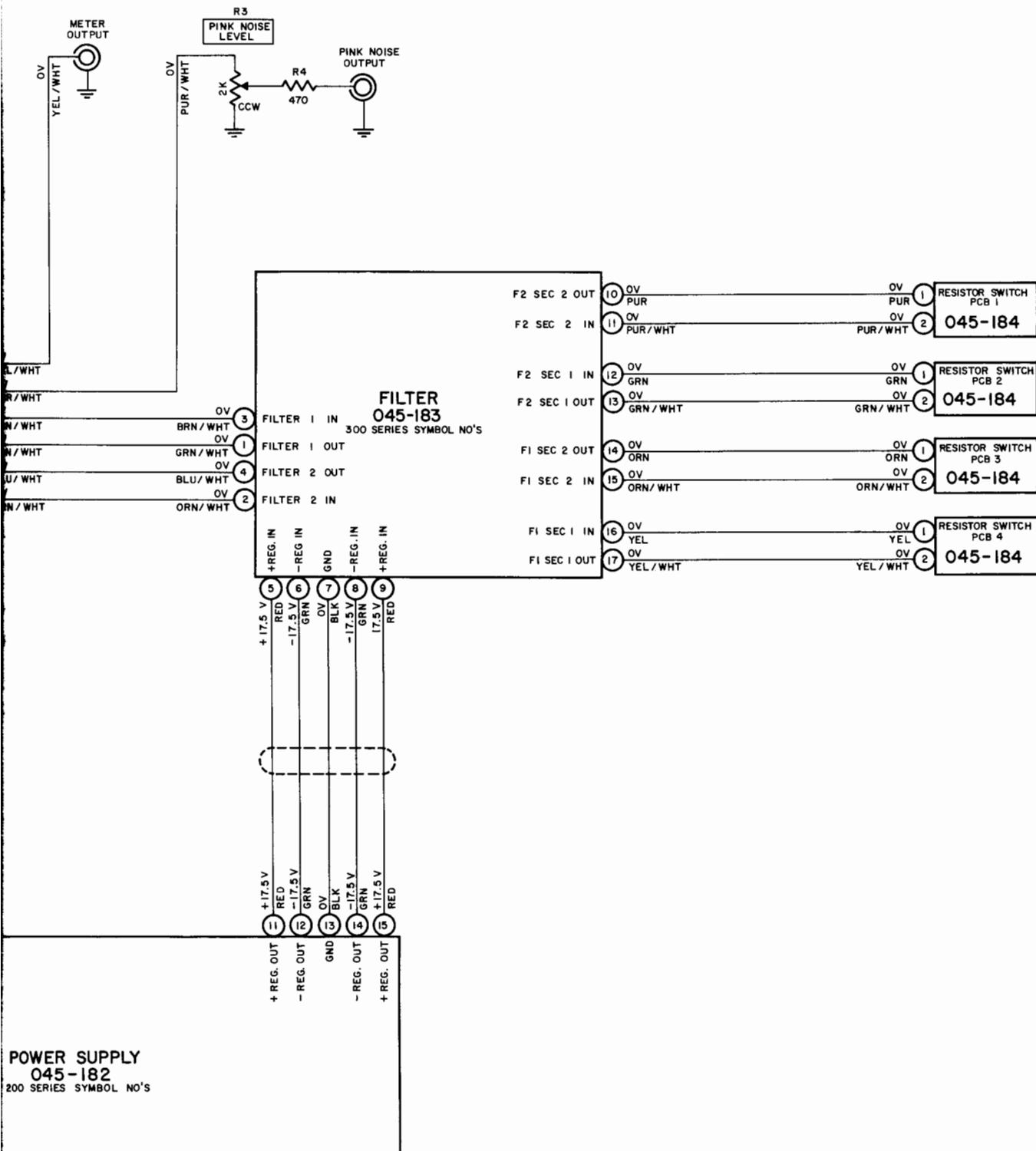
Finish: Black





BLOCK DIAGRAM



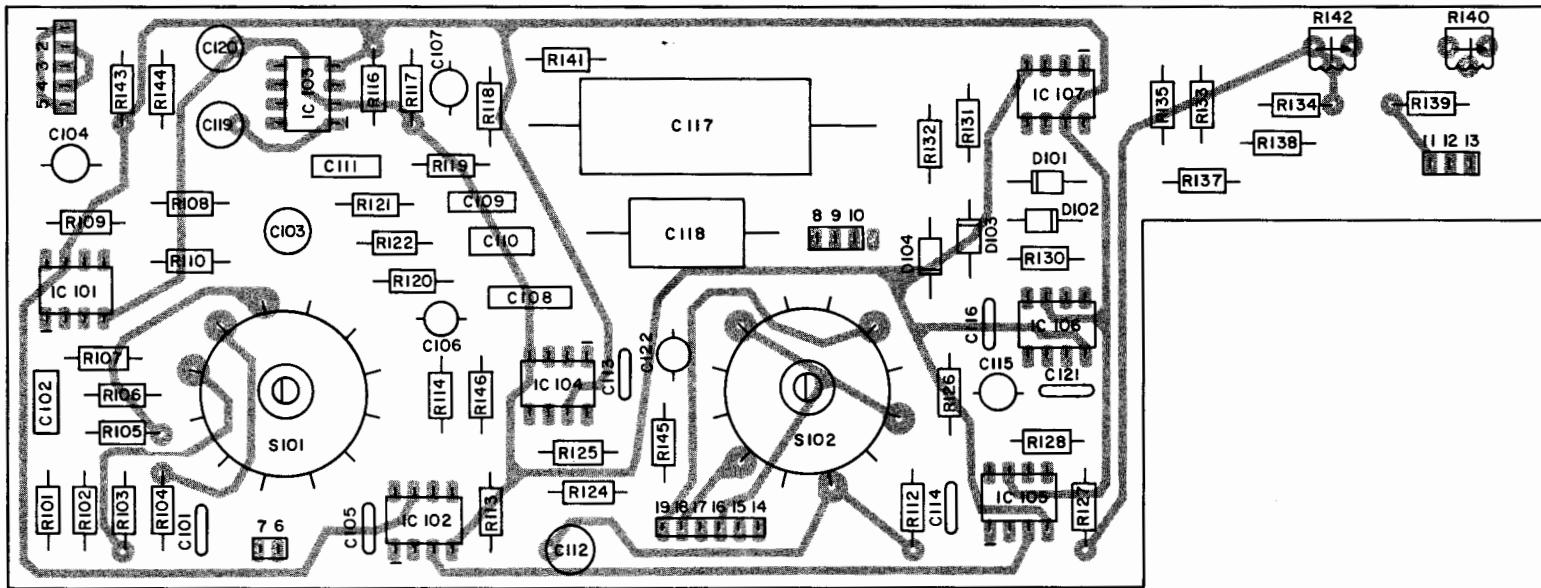


SCHEMATIC NOTES

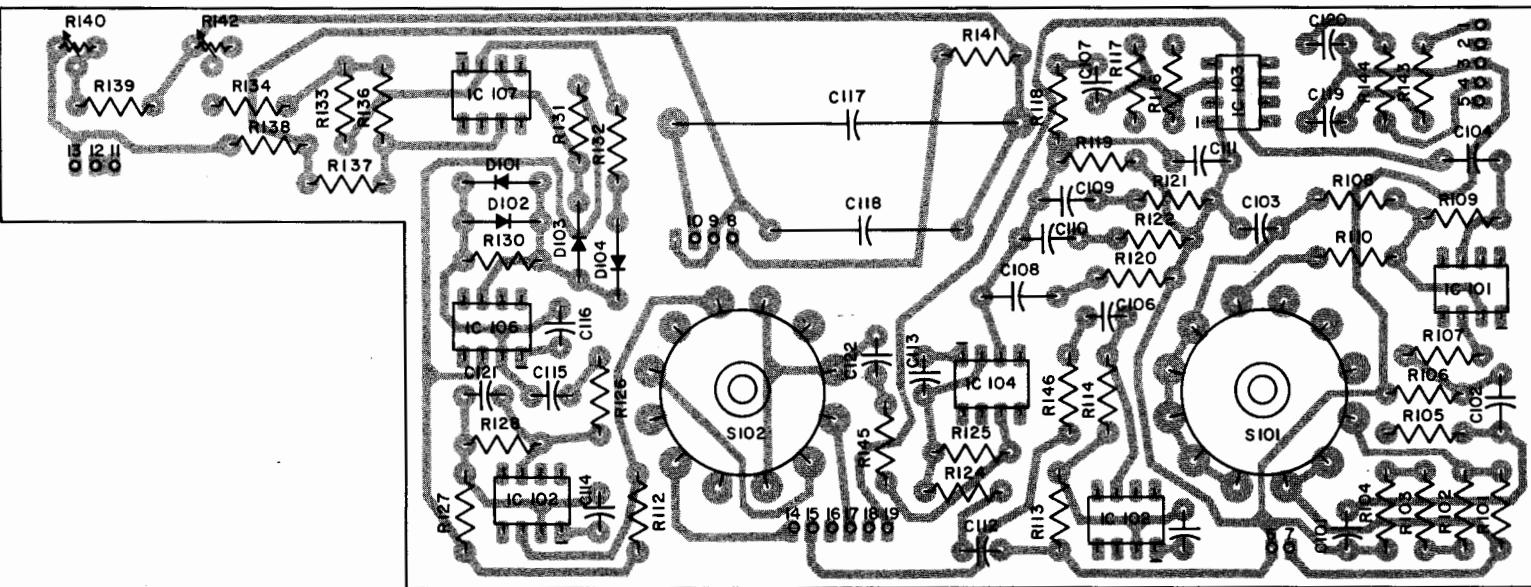
1. Unless otherwise specified: Resistance values are in ohms, 1/4 watt, and 5% tolerance; capacitance values smaller than 1 are in microfarads (μ F); capacitance values greater than 1 are in picofarads (pF); inductors are in microhenries (μ H).
2. Printed circuit board components are outlined on the schematics by dotted lines. The circled numbers around the dotted lines correspond to the numbers on the PC Board layouts.
3. The heavy lines on the schematics denote the primary signal path. The heavy dash lines on the schematics denote a secondary signal path.
4. The terminal numbering of rotary switches is for reference only.
5. All voltages indicated on the schematics are measured under the following conditions:
 - a. Use of an 11 megohm input impedance VTVM.
 - b. All voltages \pm 10% with respect to chassis ground.
 - c. No signal at input terminals.
 - d. AC input at 120 volts, 50/60 Hz.
 - e. Front panel controls at:

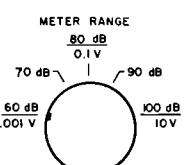
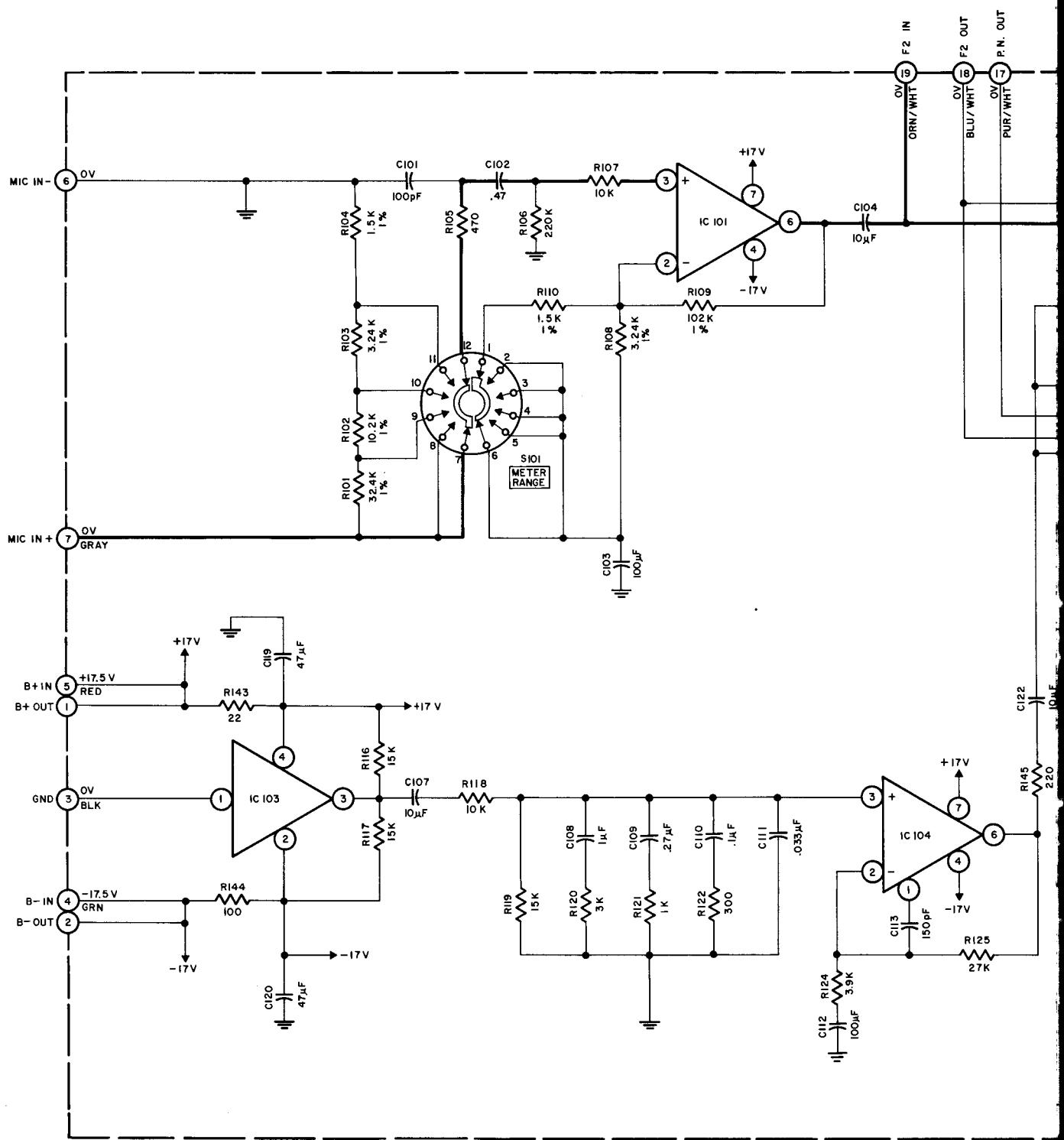
Meter Avg. Time	Fast
Frequency	1000Hz
Meter Range	80dB
Function	Filter Off
Pink Noise	ccw

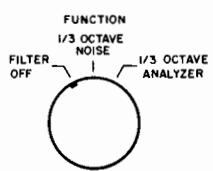
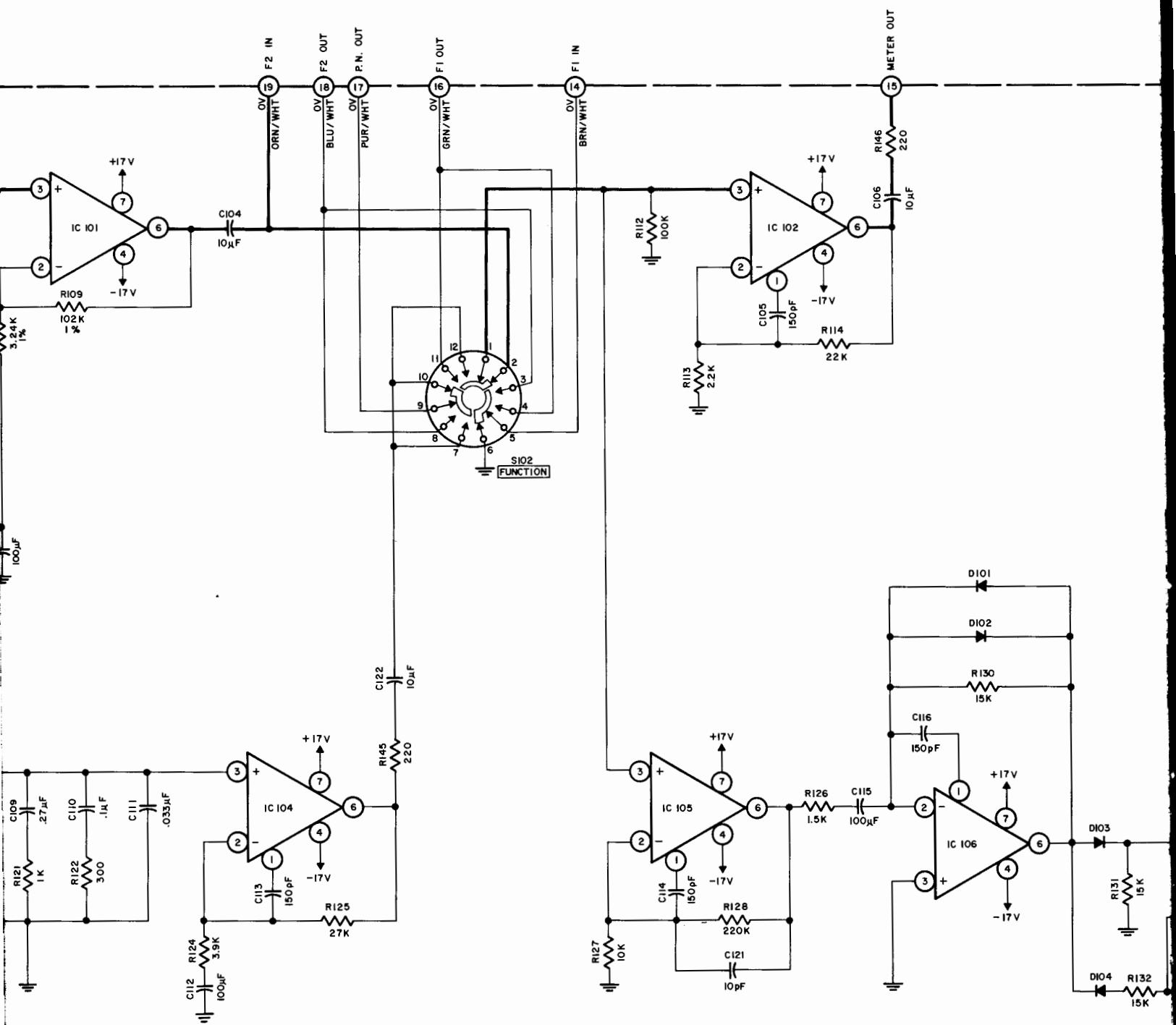
6. Four identical resistor switch P. C. boards are used per AA 2. Switch sections are numbered 1 thru 4 and resistors are numbered -1 thru -4. Example, R422-1 is on section 1 and R422-3 is on section 3.

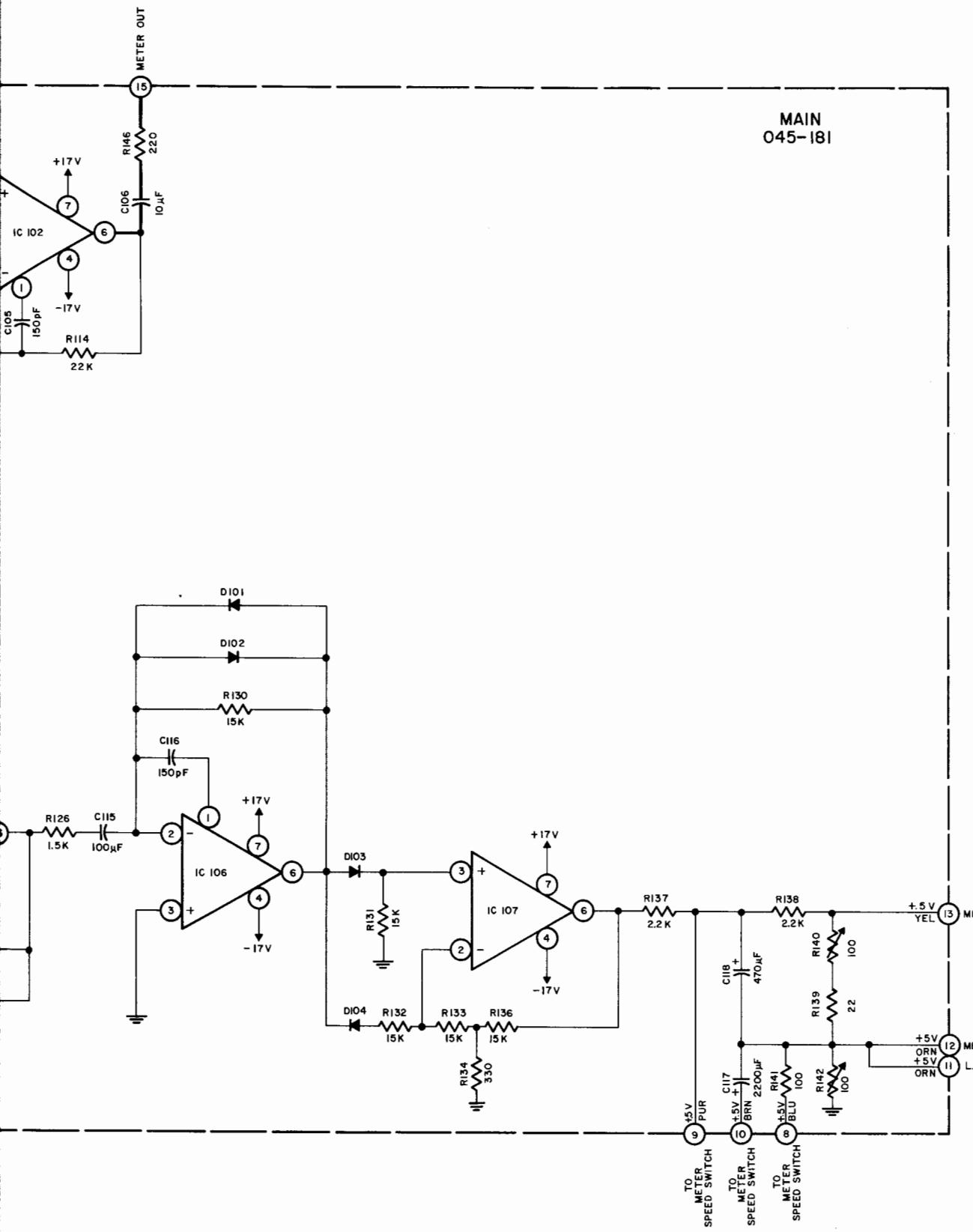


MAIN PC BOARD
045-181

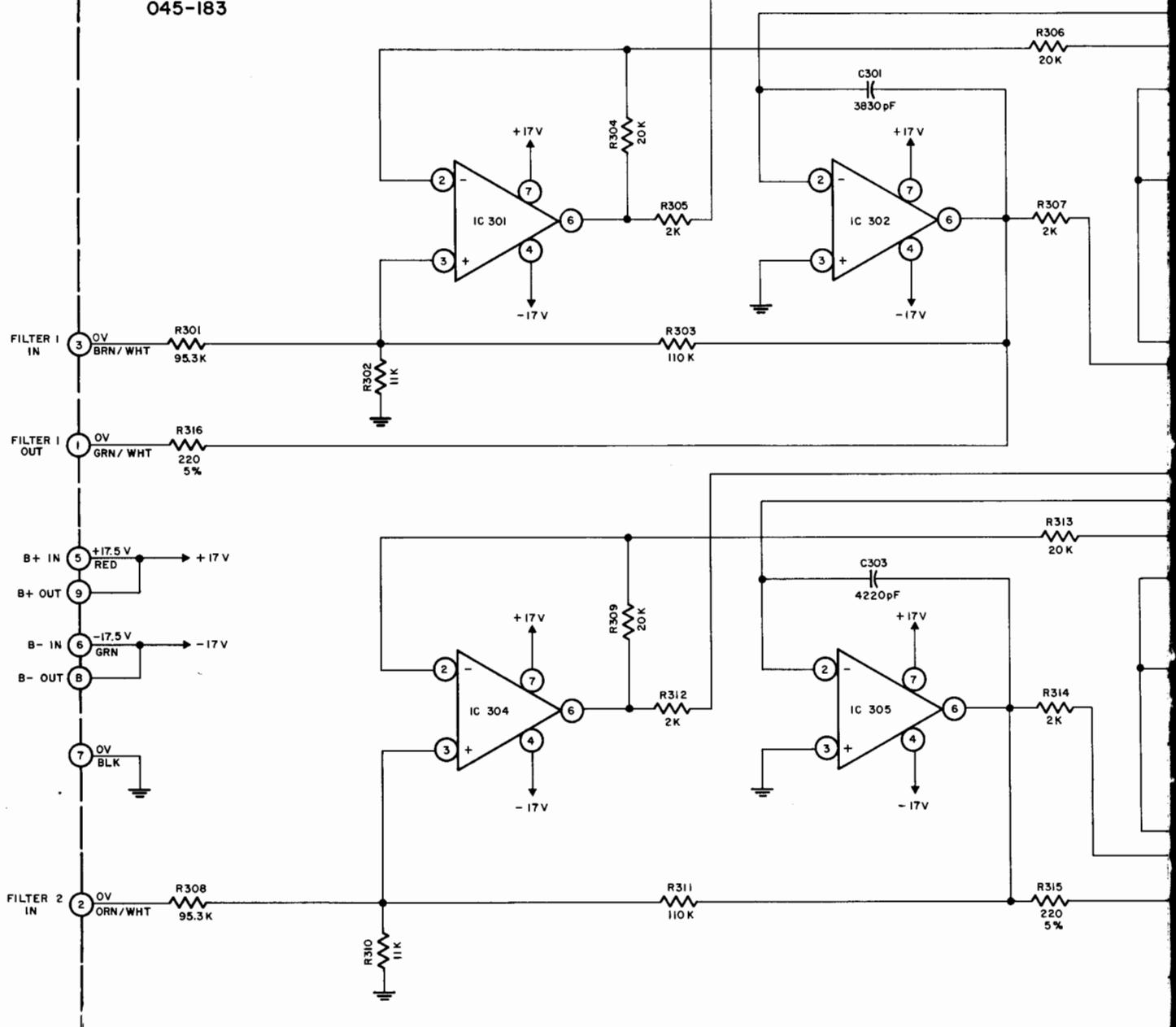


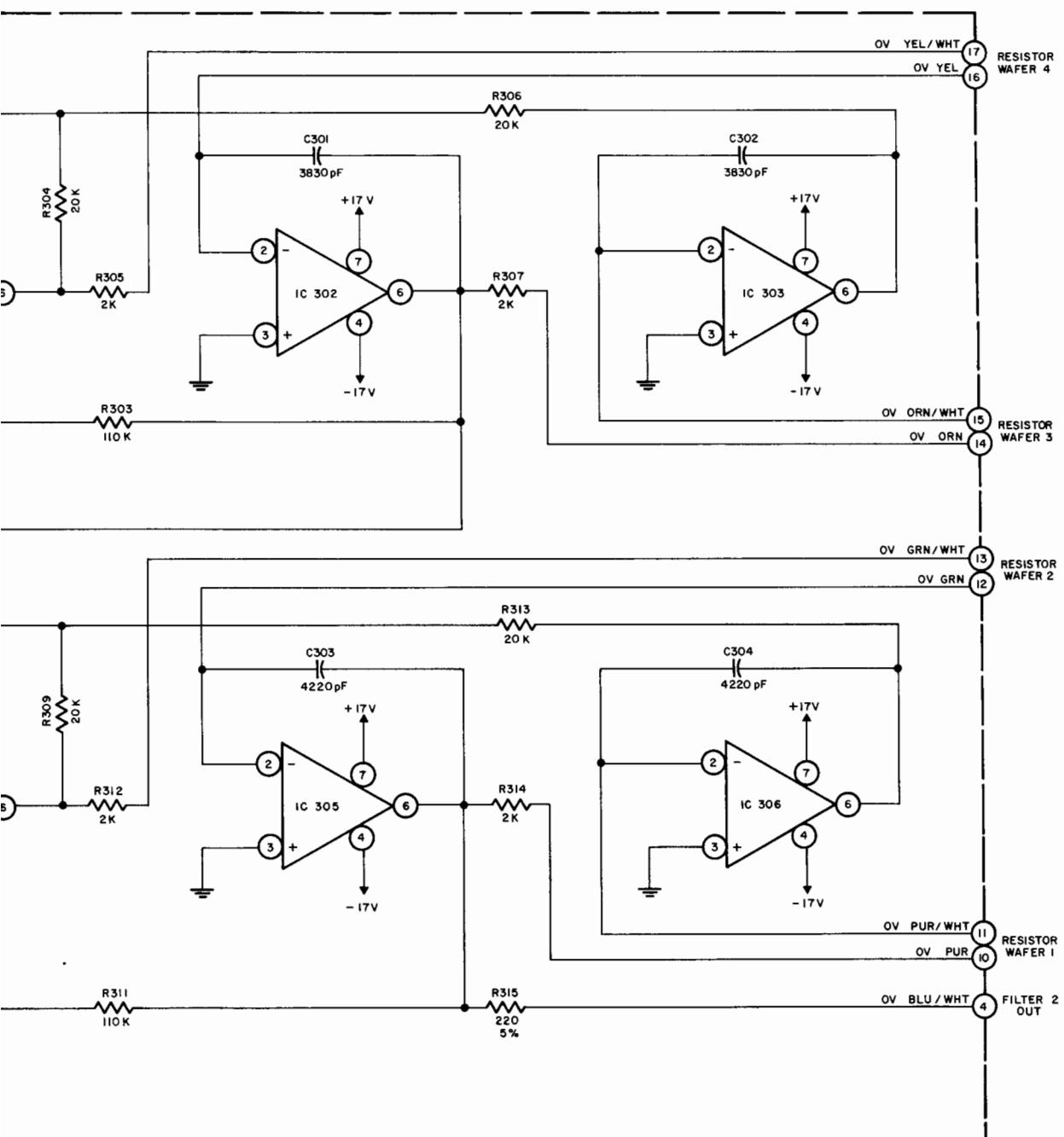


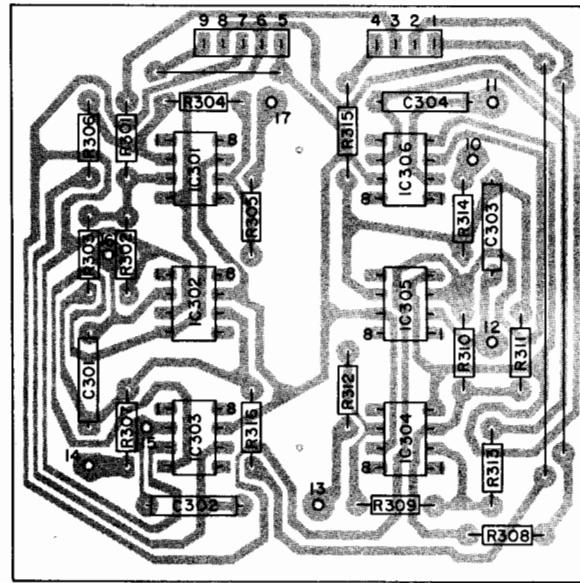




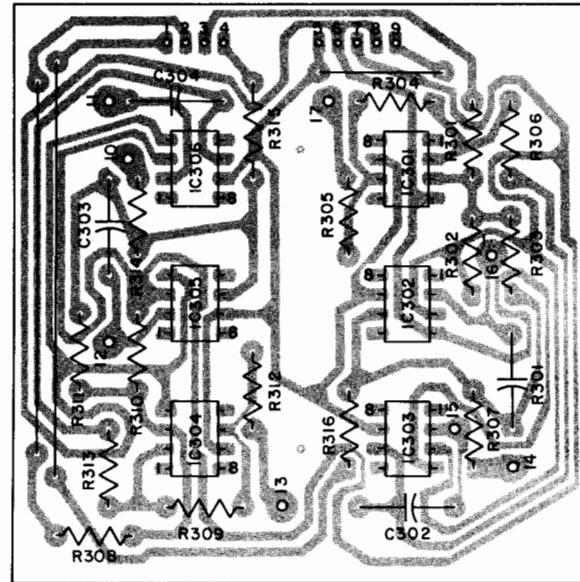
**FILTER
045-183**

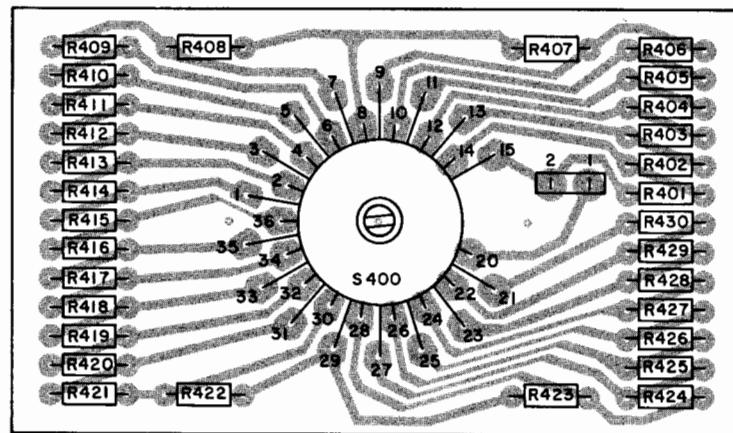




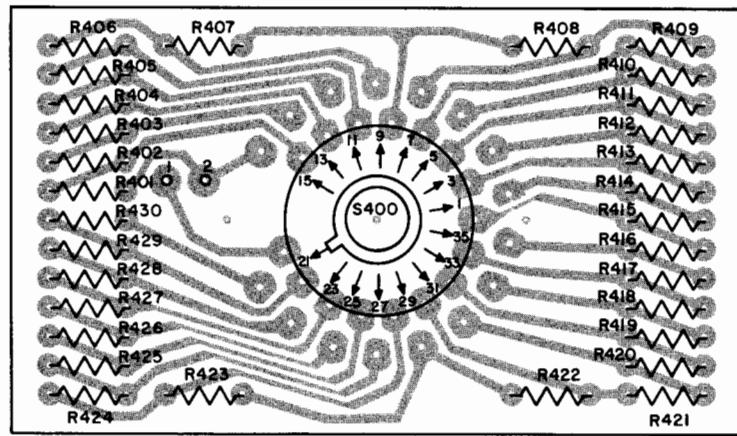


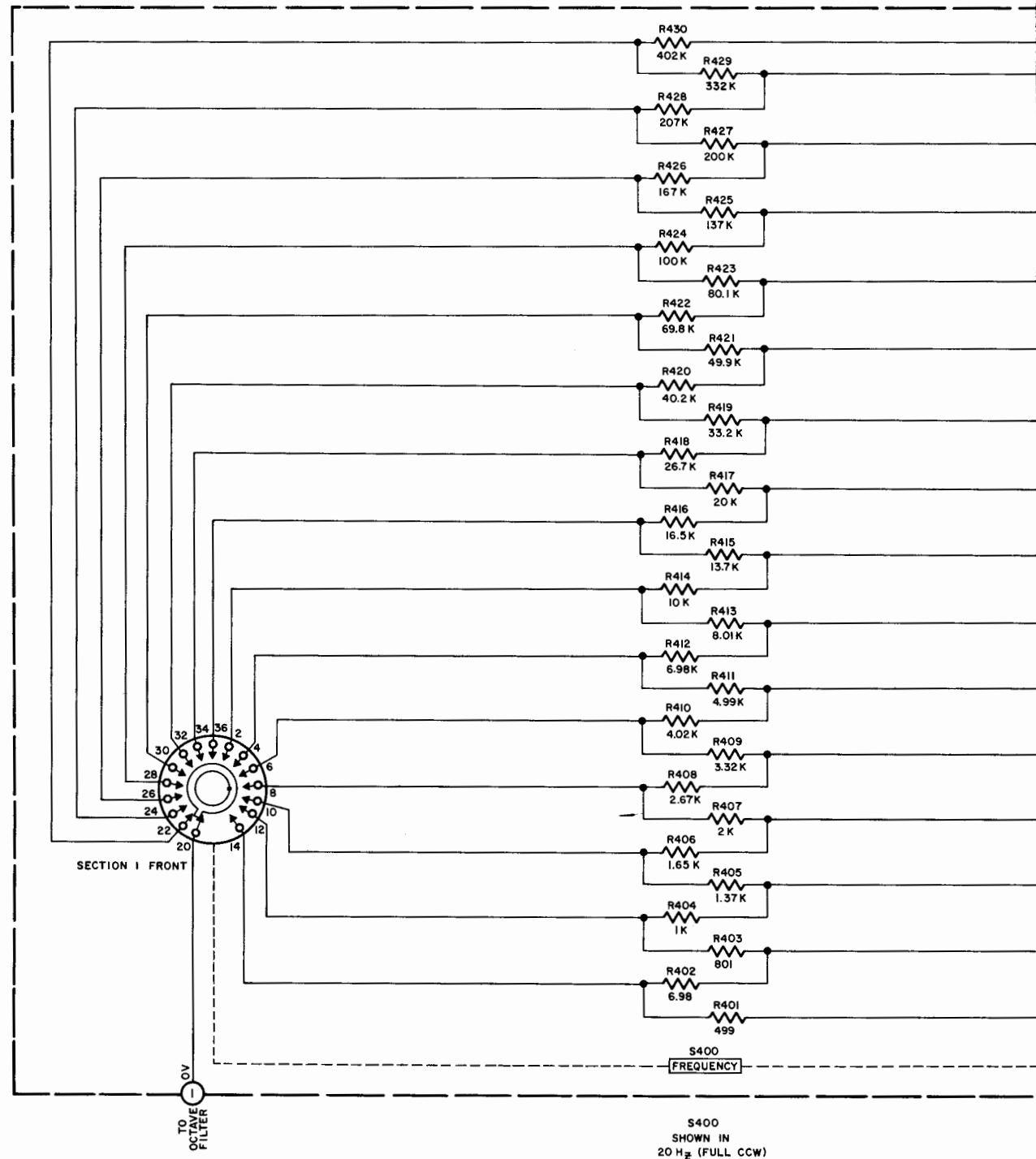
FILTER PC BOARD
045183



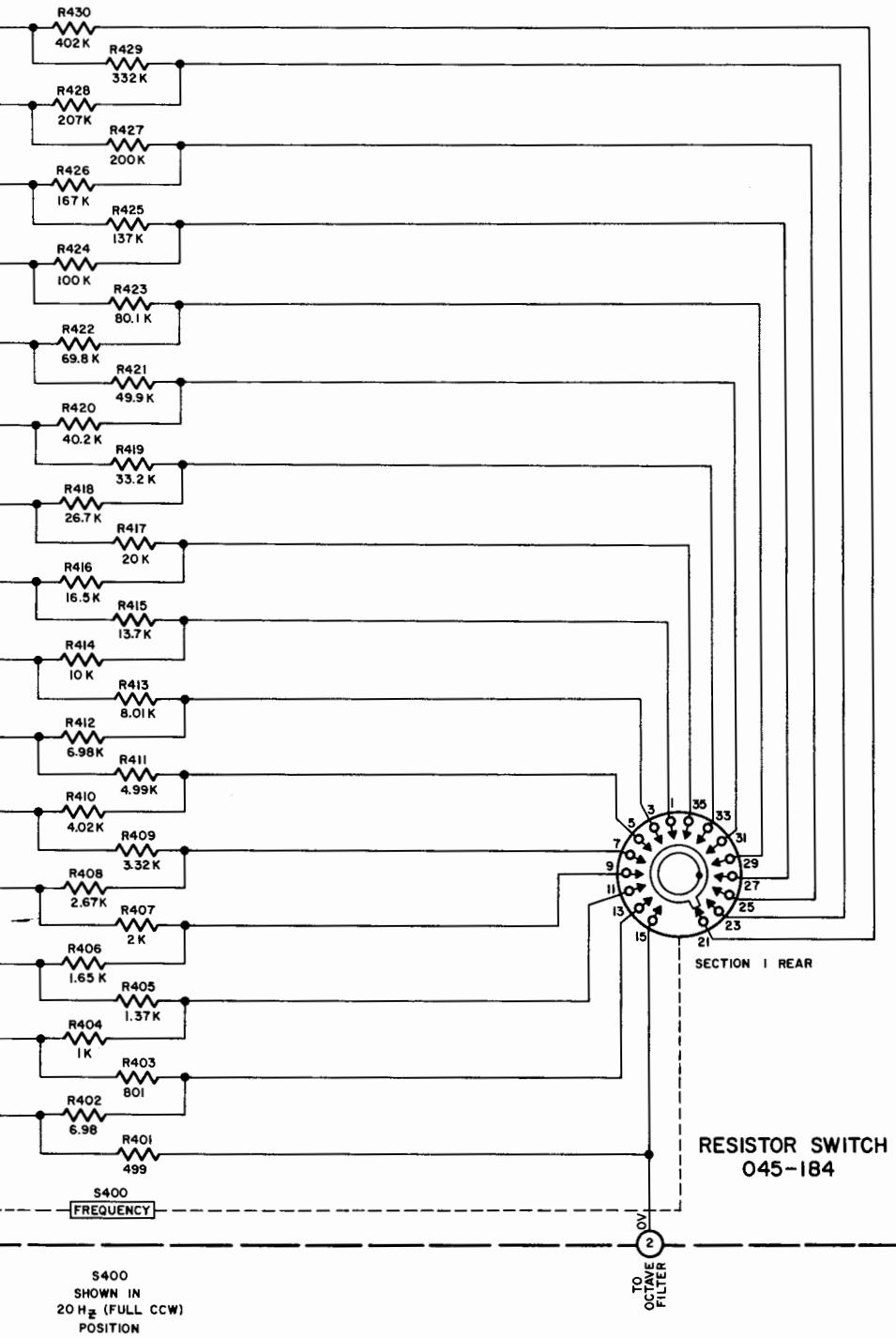


RESISTOR SWITCH PC BOARD
045-184
SEE NOTE 6

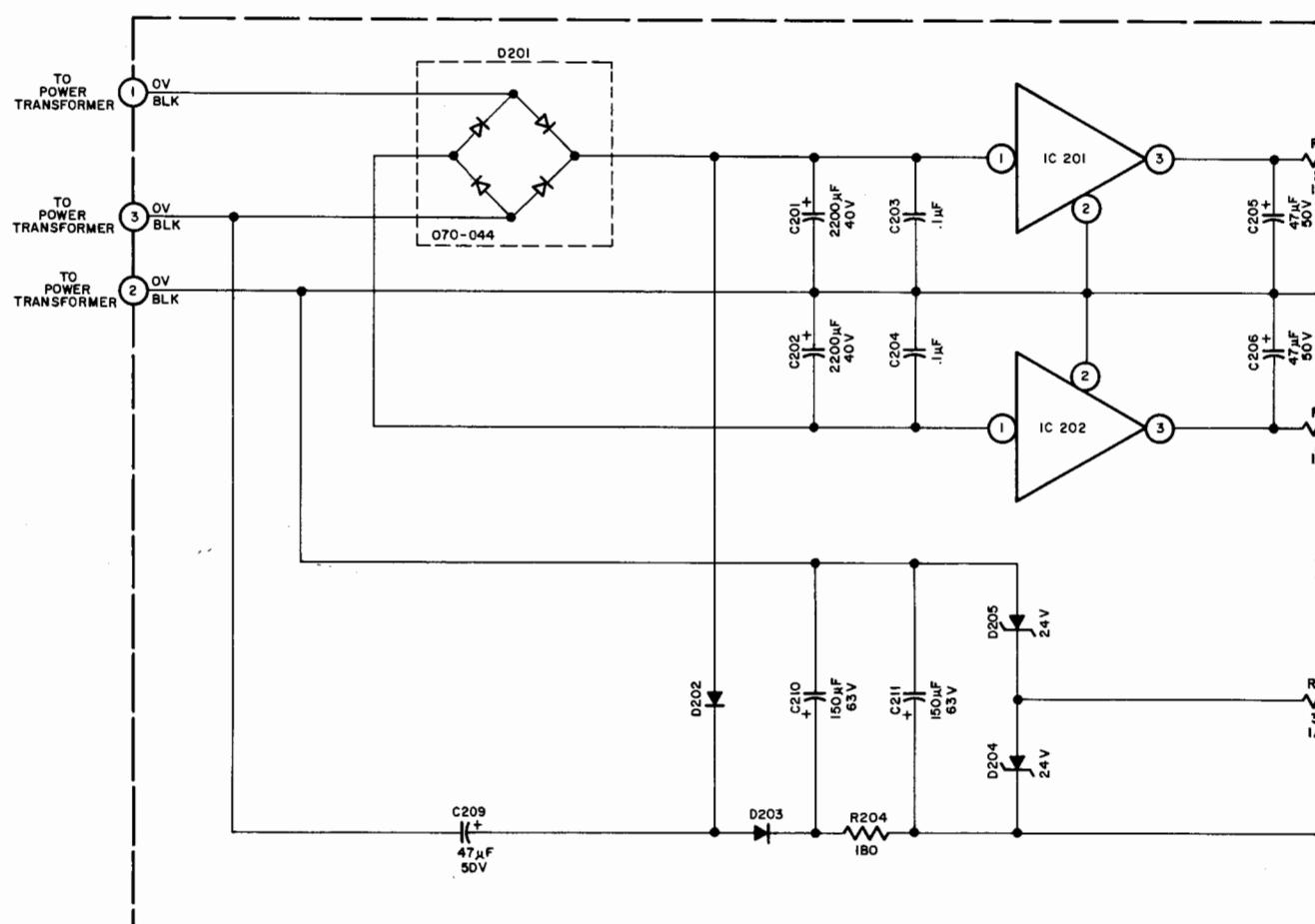


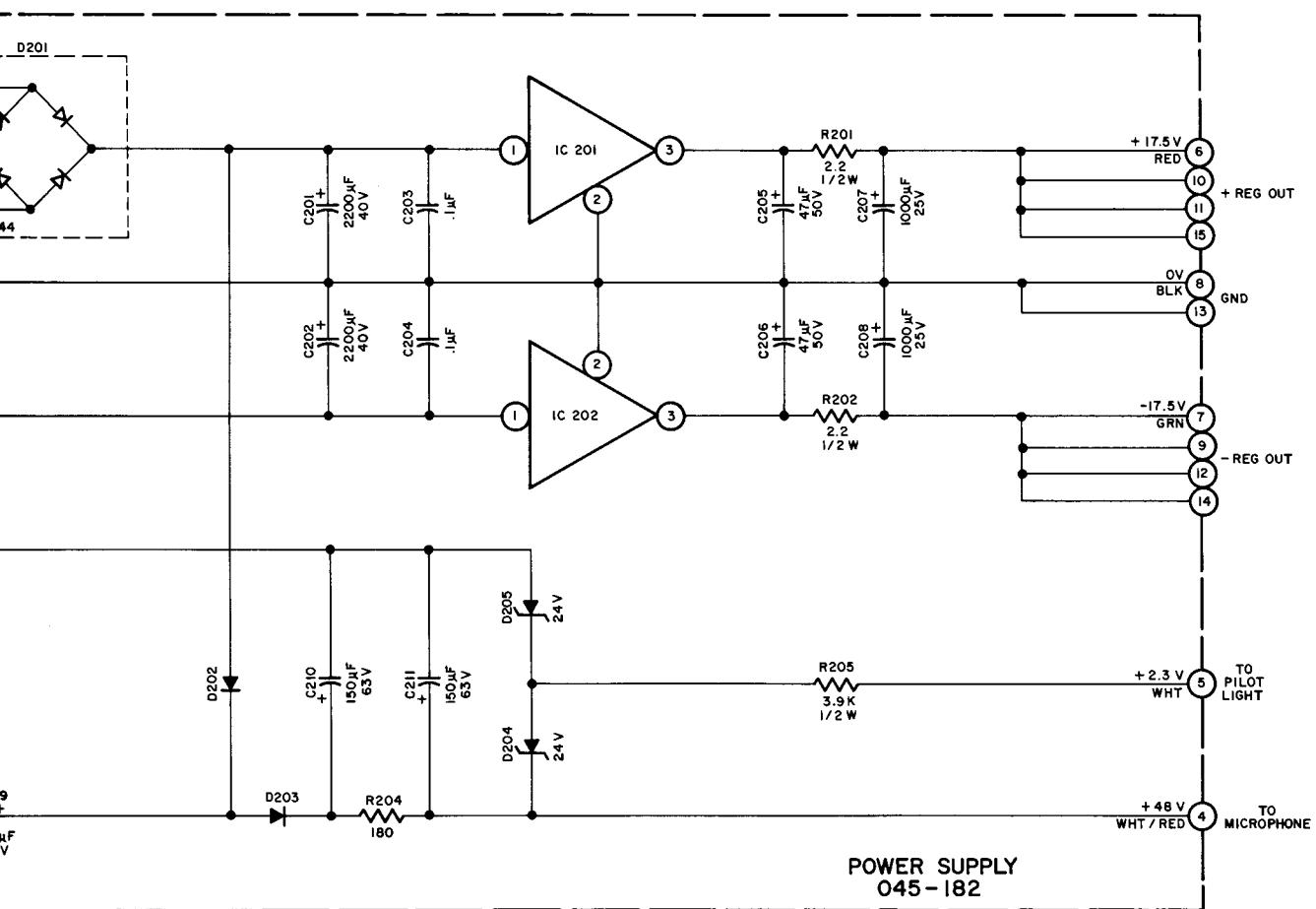


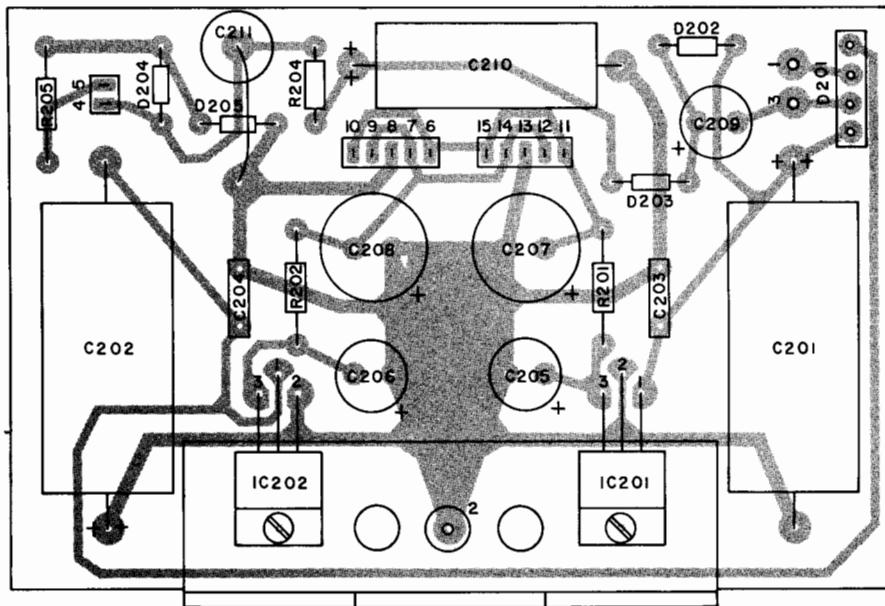
S400
SHOWN IN
20 Hz (FULL CCW)
POSITION



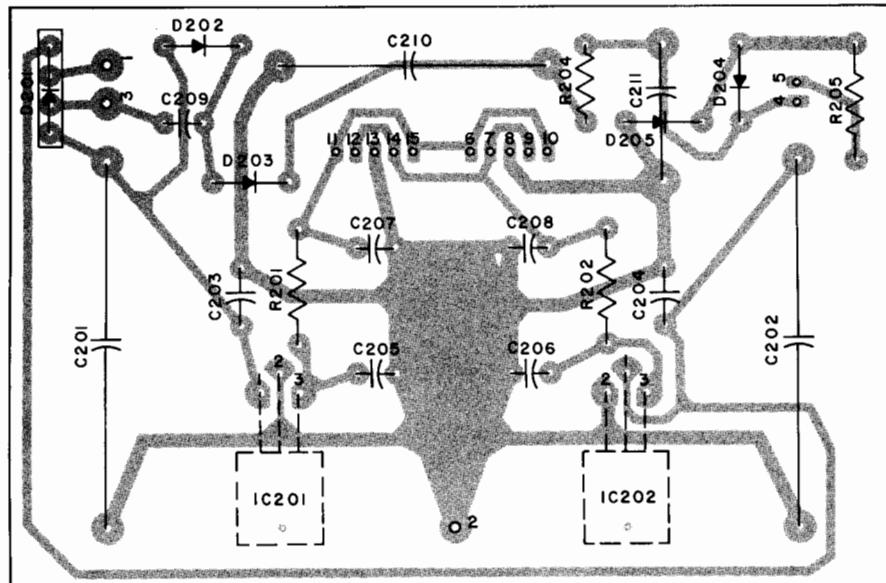
RESISTOR SWITCH







AA2 POWER SUPPLY PC BOARD
045182



REPLACEMENT PARTS

All parts not listed are common items obtainable from radio parts jobbers.

Replacement parts may be obtained when ordered by PART NUMBER from:

McIntosh Laboratory, Inc.
Customer Service Department
2 Chambers Street
Binghamton, New York 13903
(Telephone 607-723-3512)

Symbol Number	DIODES Description	Part Number	Pink noise level MICROPHONE	090-193
D1	LED lamp	070-100	Microphone	250-049
D101,102	Si. signal diode	070-047	MISCELLANEOUS	
D103,104	Si. signal diode	070-047	Mic stand adapter	114-062
D201	Bridge	070-044	Cable 6 ft.	170-109
D202,203	Si. signal diode	070-047	Cable 6 ft.	170-110
D204,205	Zener 24V	070-065	Handle	114-060
INTEGRATED CIRCUITS			Owners Manual	039-026
IC101,107	Integrated Circuit	133-043	Graph paper pad	039-050
IC102,104	Integrated Circuit	133-037	Line cord	170-021
IC105,106	Integrated Circuit	133-037	Fuseholder	178-099
IC103	Integrated Circuit	133-055	Shipping carton	033-245
IC201	Regulator + 18V	133-045	Headphone jack	117-138
IC202	Regulator - 18V	133-044		
IC301,302	Integrated circuit	133-043		
IC303,304	Integrated circuit	133-043		
IC305,306	Integrated circuit	133-043		
SWITCHES				
S101	Meter range	146-189		
S102	Function	146-190		
S400	Filter (Wafer)	146-192		
S400	Filter (Hardware)	146-191		
S1	Time averaging	149-011		
S3	Power	149-011		
POTENTIOMETERS				
R1	Mic. Cal.	134-318		
R3	Pinc noise level	134-317		
R140,142	Trimmer 100Ω	134-298		
TRANSFORMERS				
T1	Power transformer	159-140		
FUSES				
F1	Fuse 1/8A Norm Blo	089-035		